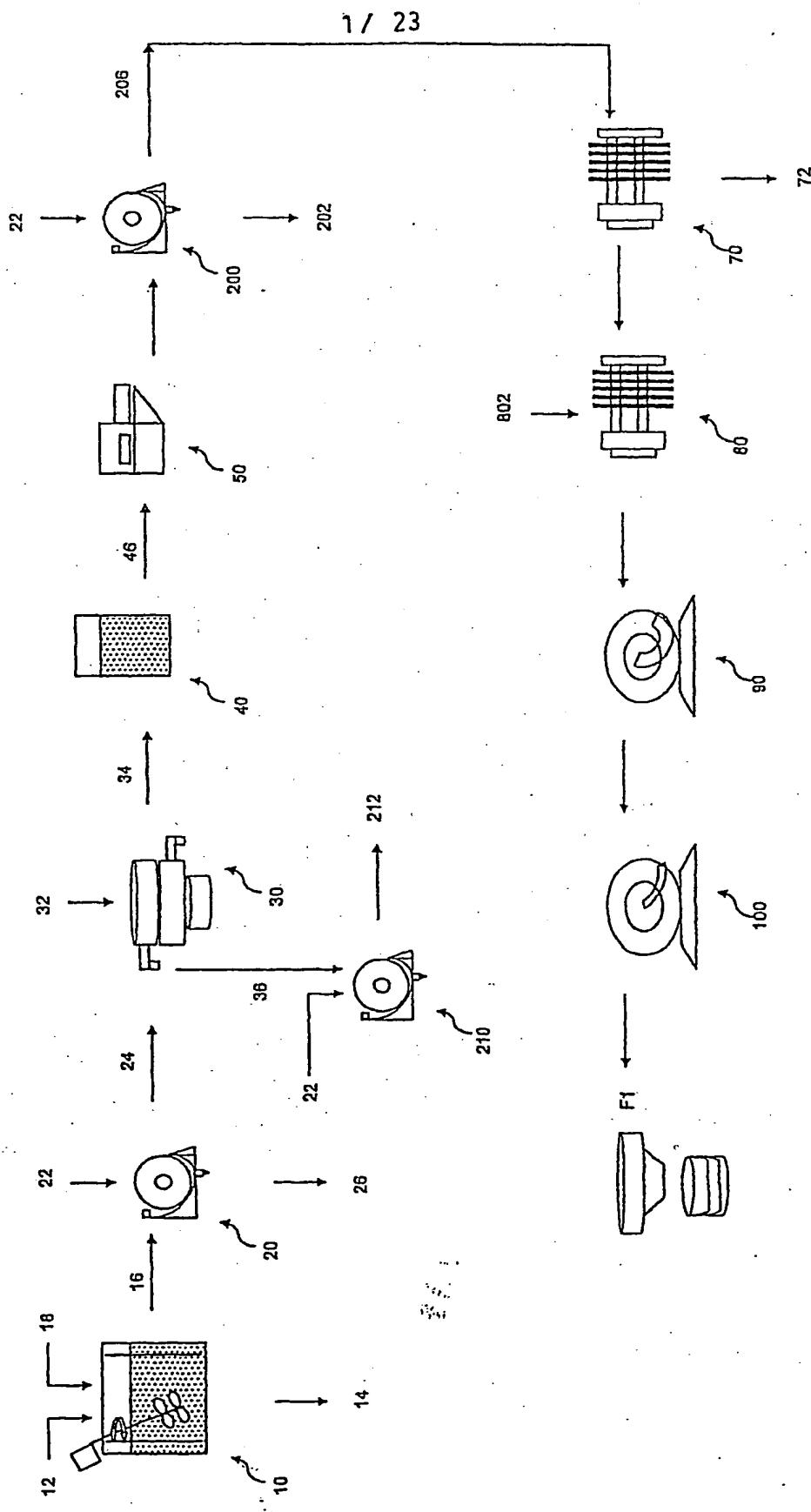


Figure 1



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Figure 2

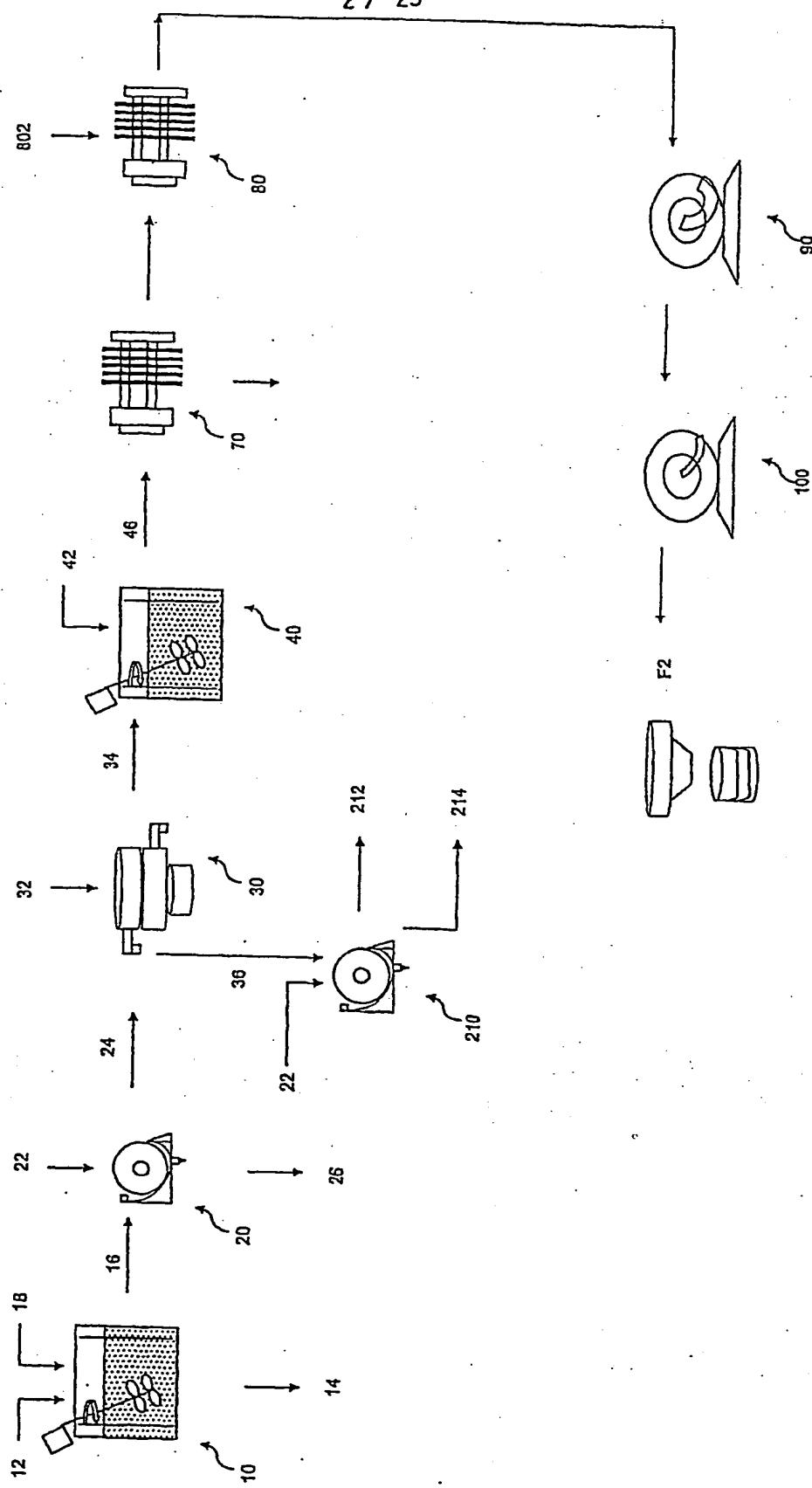


Figure 3

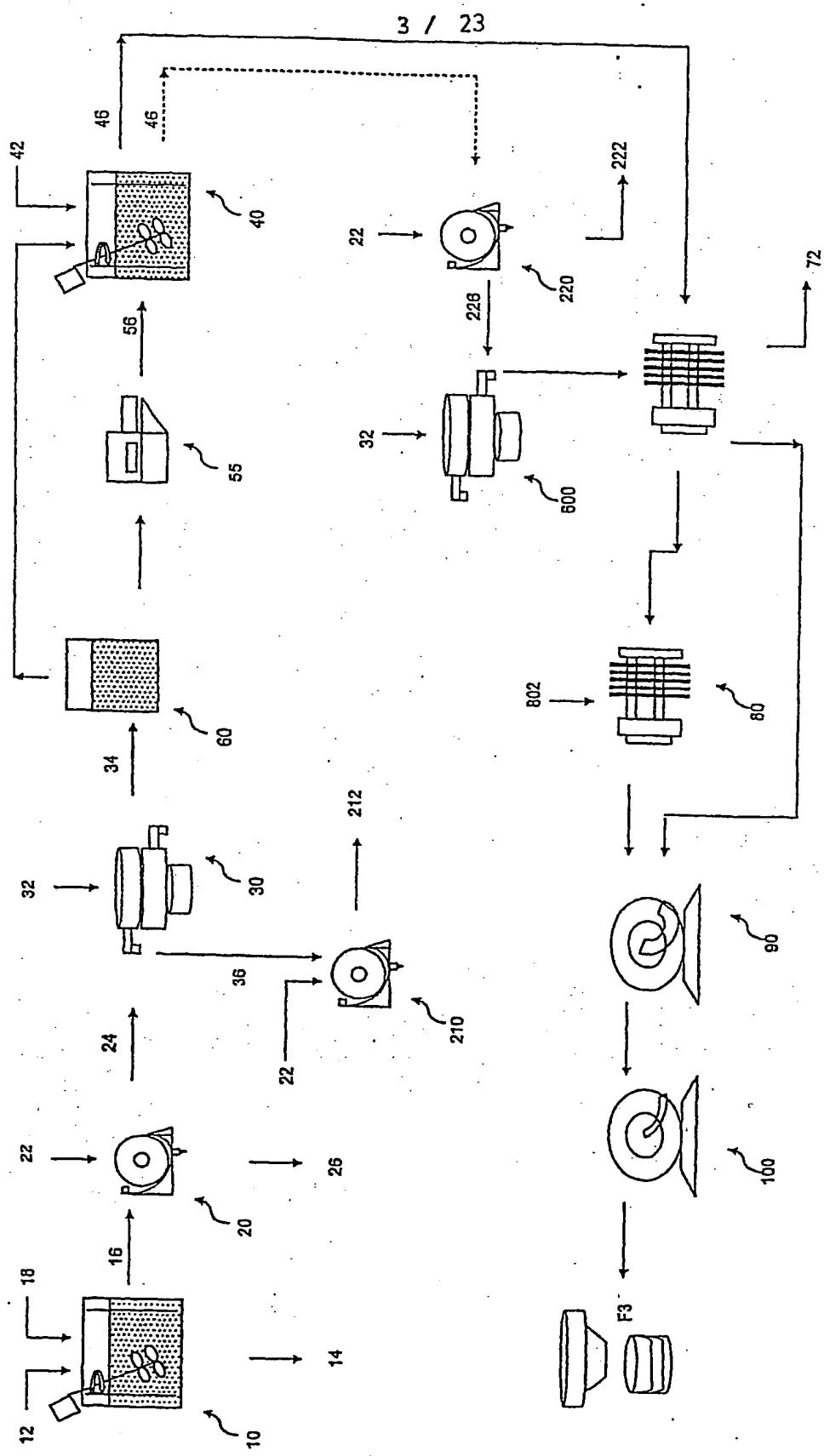


Figure 4

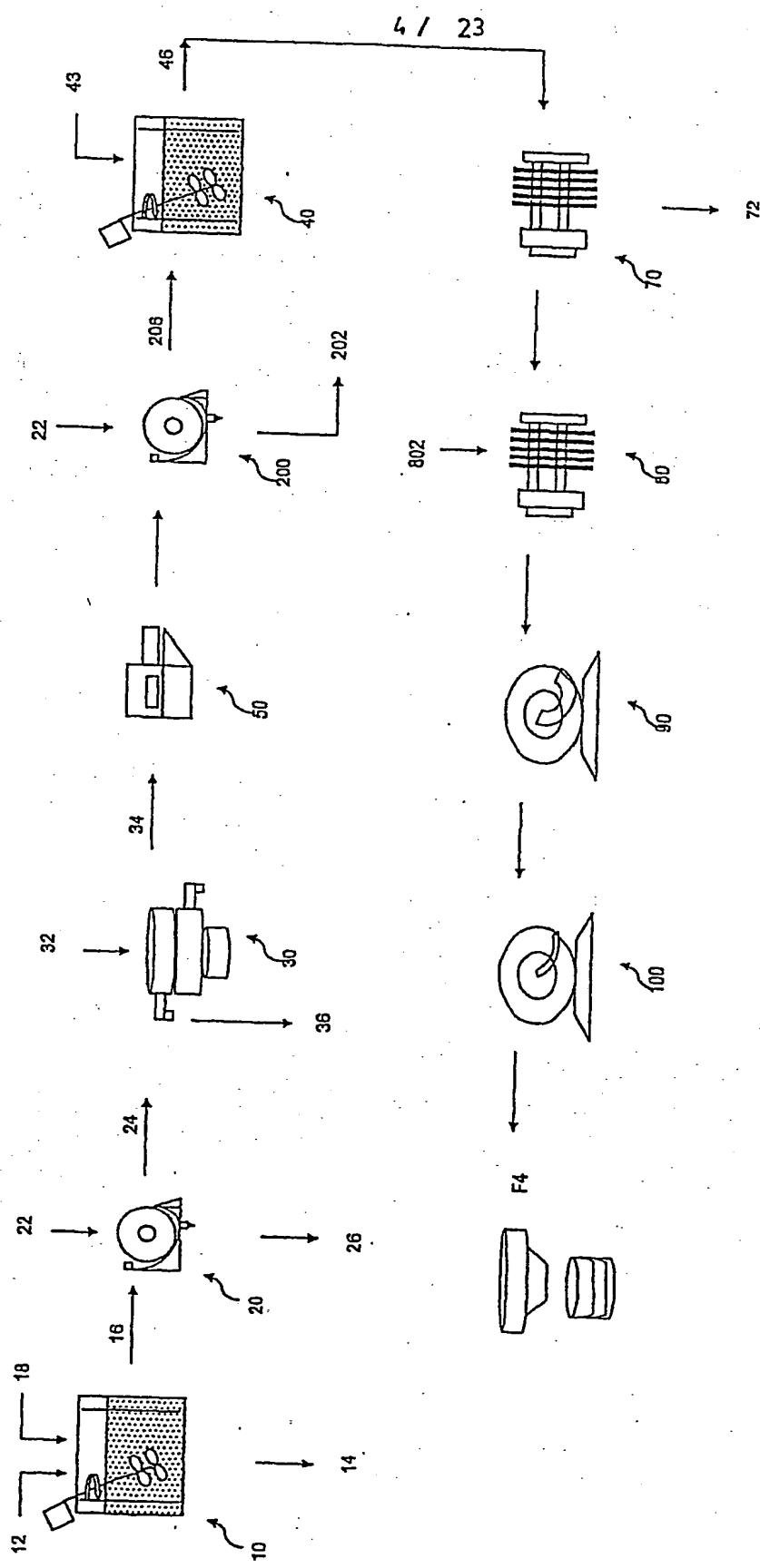


Figure 5

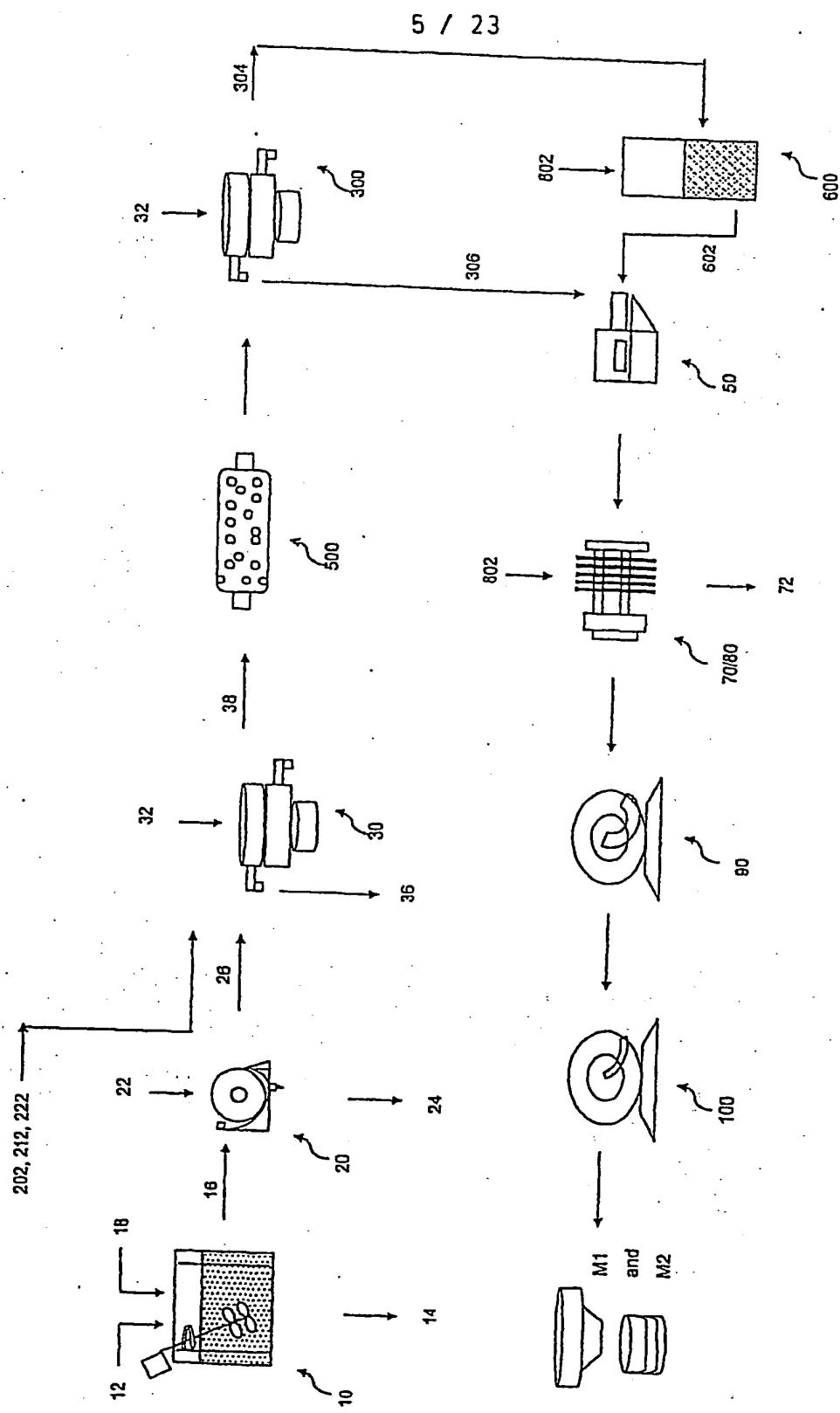
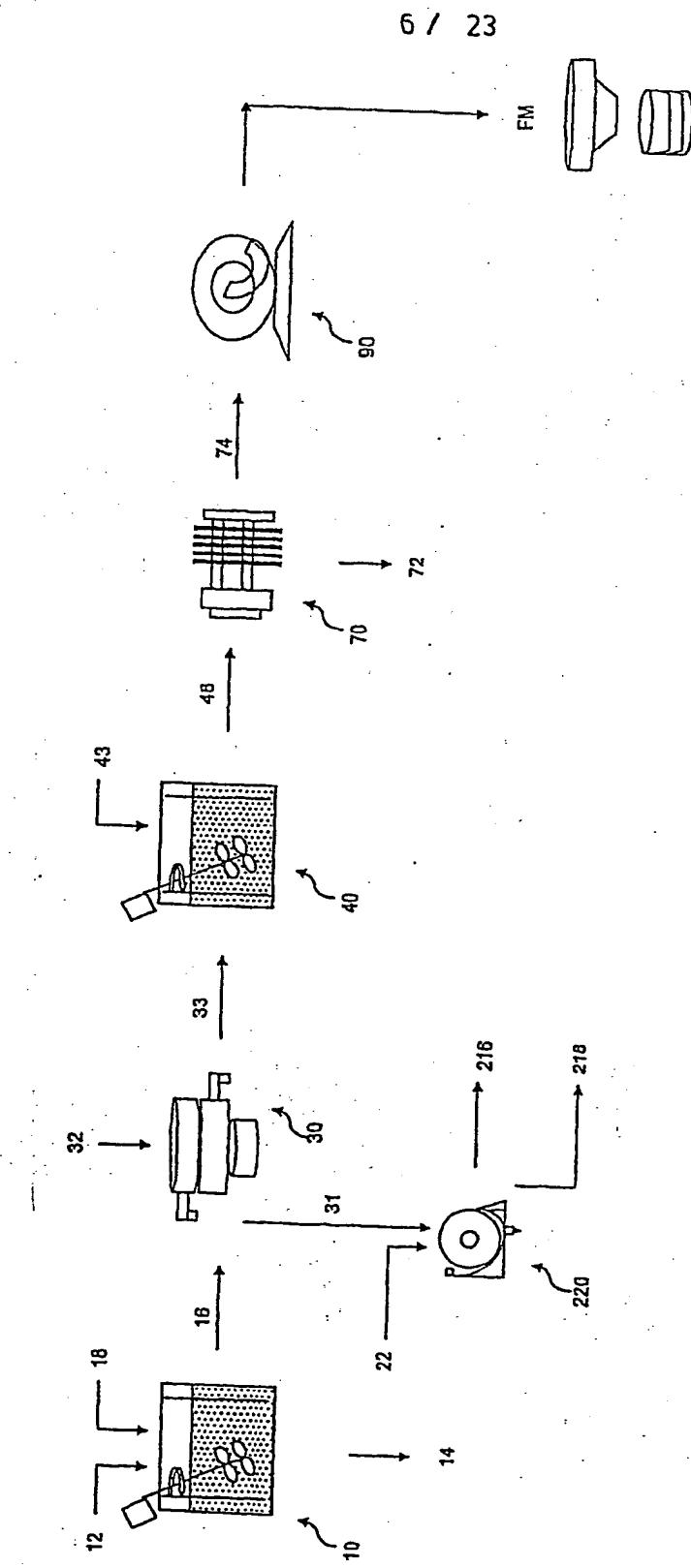


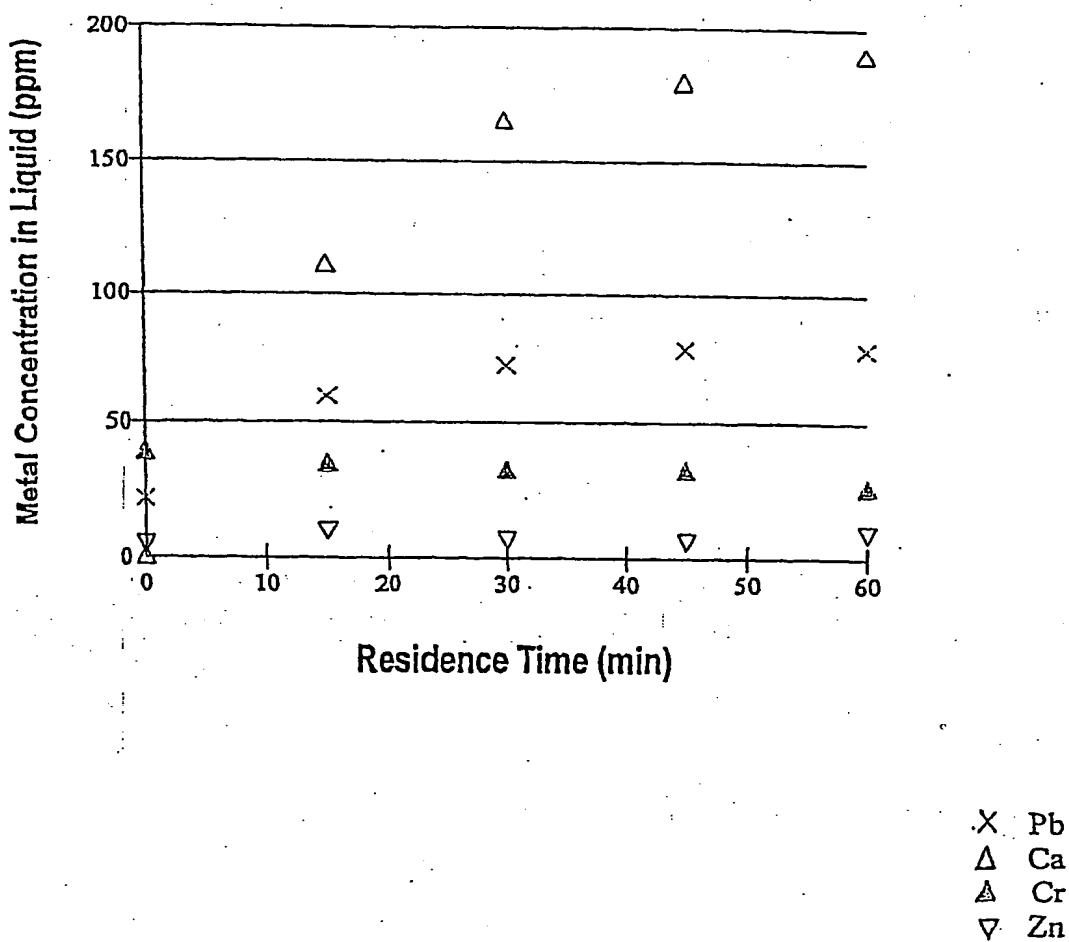
Figure 6



77 23

Figure 7

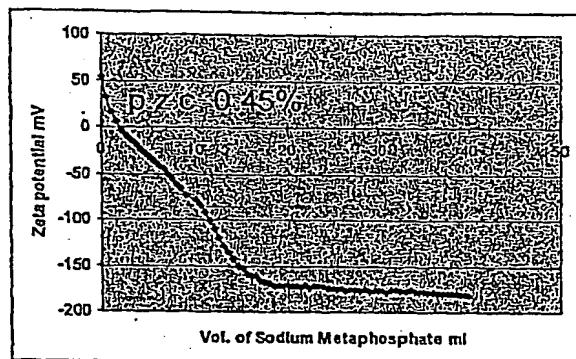
Metals Extraction VS Residence Time for Hydrofoil Impeller



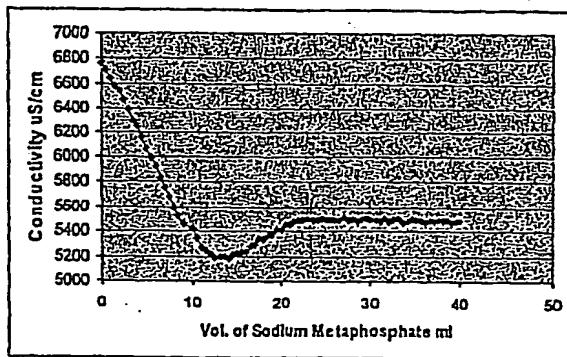
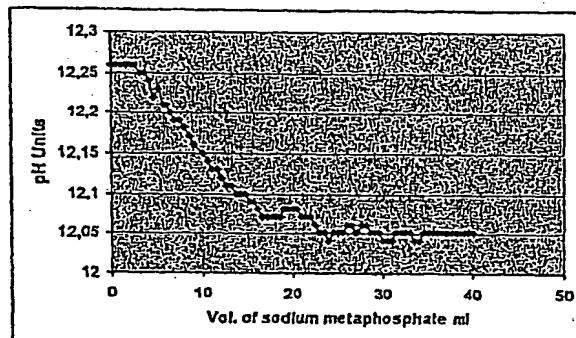
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Figure 8

Variation of Zeta Potential, pH and Conductivity VS Concentration of Sodium Metaphosphate for a Partly Washed Dust Slurry



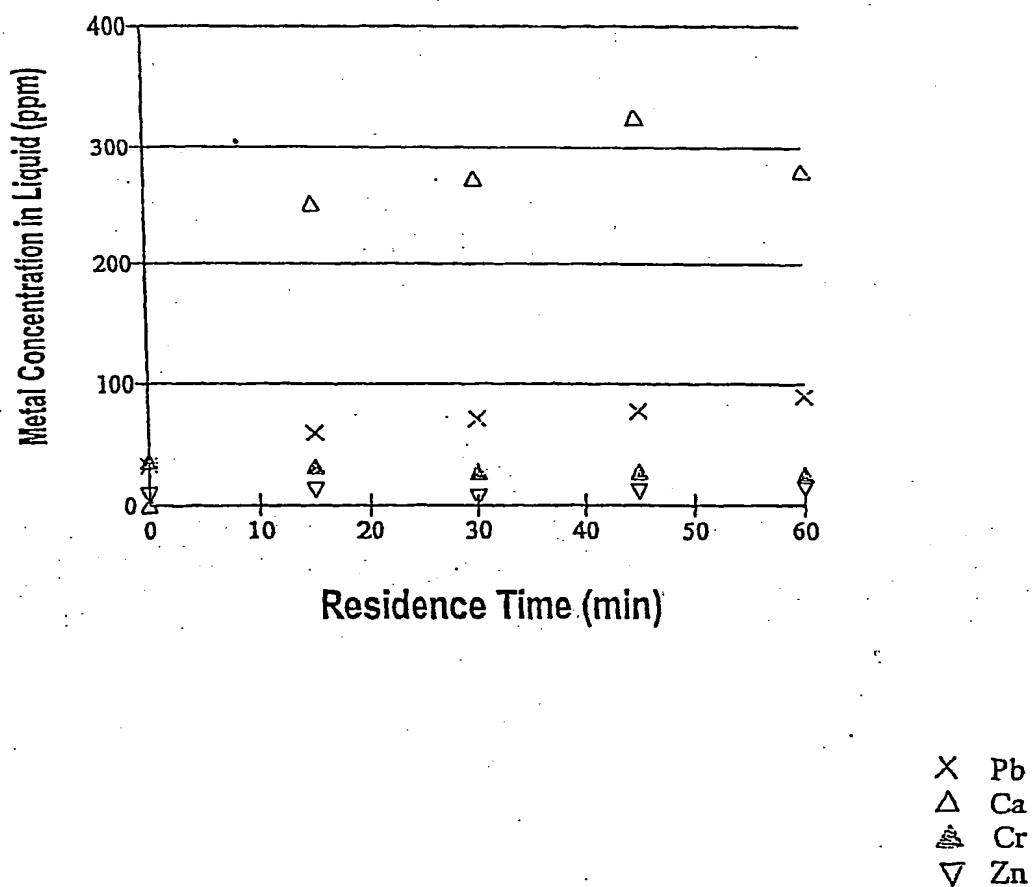
p.z.c — point zero charge (isoelectric point)



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Figure 9

Metals Extraction VS Residence Time for High Shear Impeller



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MATRIX

c:\ACOUSTIC PARTICLE SIZER\APS-
MATRICIES\IRON OXIDE IN WATER TO
30 um.MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.65	gm /cm/s
SOUND SPEED	149658.57	m /s
pH	11.24	
PERCENT SOLIDS, VOLUME	0.58	

SOLVENT

c:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	625.75	µS /cm
TEMPERATURE	24.28	DEG. C
FIXED LOSS	7.19	dB
DENSITY	1.10	gm / Cm ³

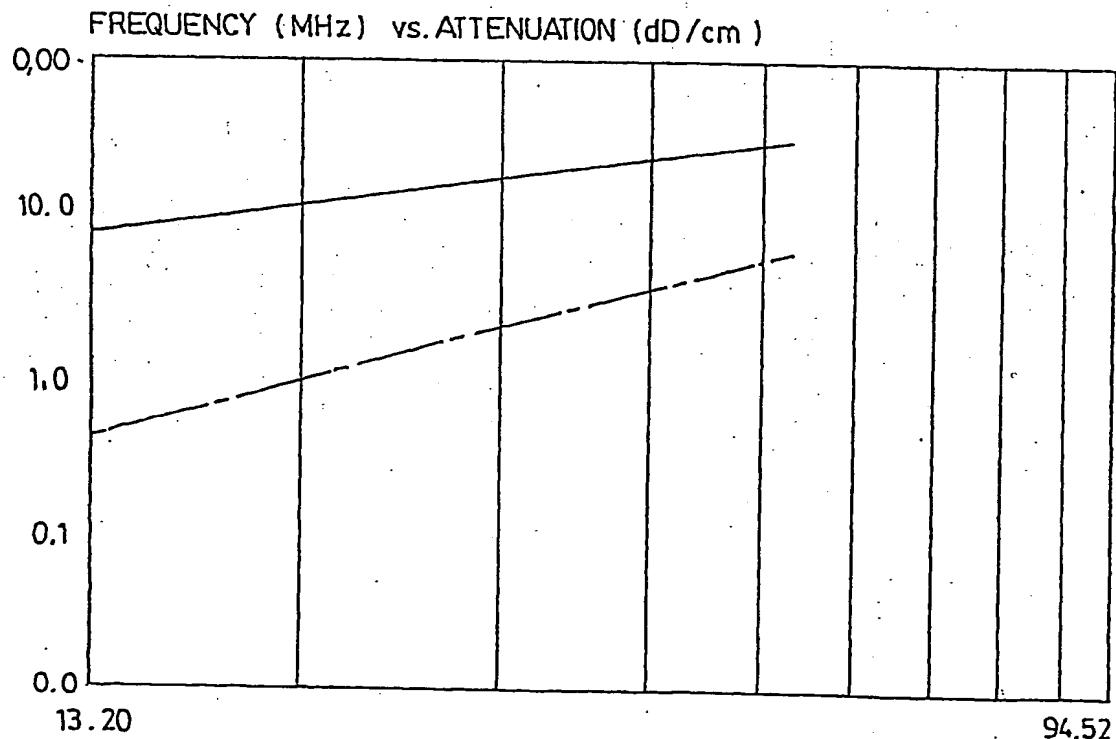


FIG. 10A

SAMPLE ATTEN. _____
SOLVENT ATTEN. _____

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MATRIX	C:\ACOUSTIC PARTICLE SIZER\APS-MATRICIES\IRON OXIDE IN WATER TO 30 um.MAT	
VERSION	4.4	
ACOUSTIC IMPEDANCE	1.65	gm/cm/s
SOUND SPEED	149658.57	m/s
pH	11.24	
PERCENT SOLIDS, VOLUME	0.58	

SOLVENT	C:\ACOUSTIC PARTICLE SIZER\CAL\WATER	
CONDUCTIVITY	625.75	μS / Cm
TEMPERATURE	24.28	DEG. C
FIXED LOSS	7.19	dB
DENSITY	1.10	gm / Cm ³

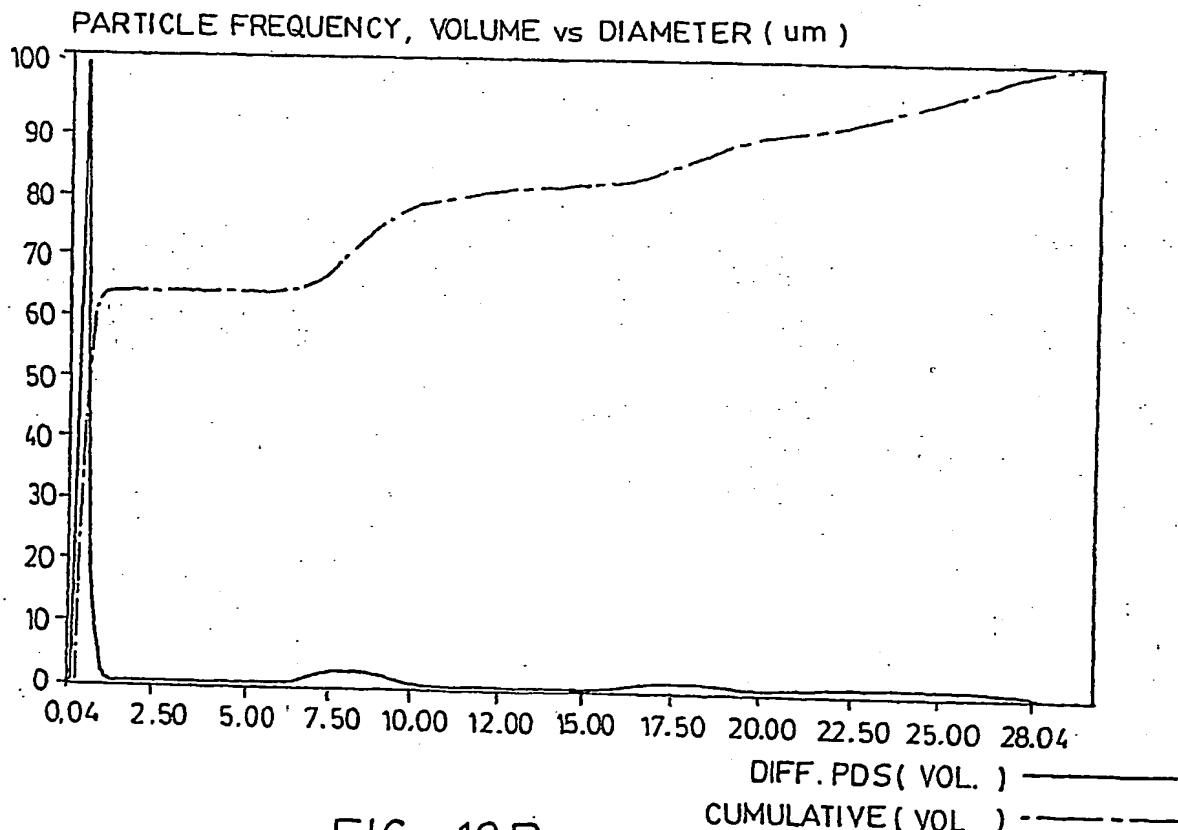


FIG. 10B

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MATRIX

C:\ACOUSTIC PARTICLE SIZER\APS-MATRICIES\IRON OXIDE IN WATER TO 30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1. 65	gm / cm/s
SOUND SPEED	149658. 57	m / s
pH	11. 24	
PERCENT SOLIDS, VOLUME	0. 58	

SOLVENT

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	625. 75	µS / Cm
TEMPERATURE	24. 28	DEG. C
FIXED LOSS	7. 19	dB
DENSITY	1. 10	gm / Cm ³

PARTICLE FREQUENCY, AREA vs. DIAMETER (um)

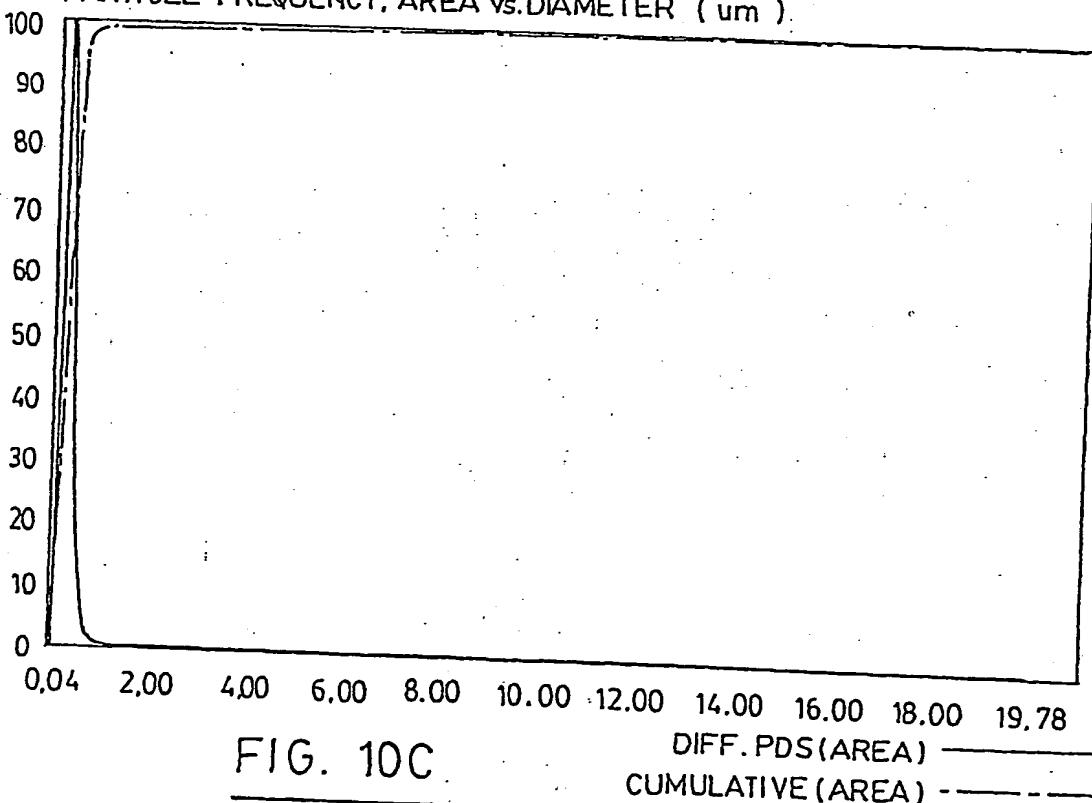


FIG. 10C

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MATRIX 

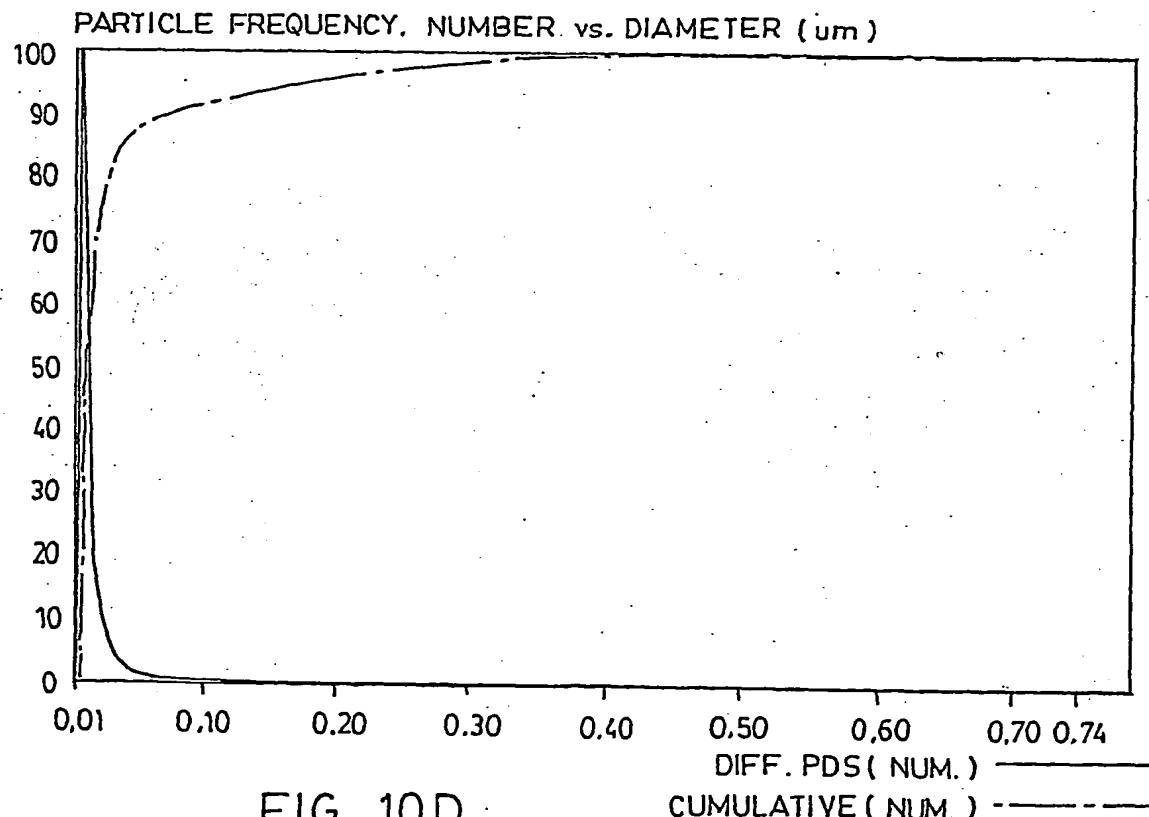
C:\ACOUSTIC PARTICLE SIZER\APS-MATRICIES\IRON OXIDE IN WATER TO 30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1. 65	gm / cm / s
SOUND SPEED	149658. 57	m / s
pH	11. 24	
PERCENT SOLIDS, VOLUME	0. 58	

SOLVENT 

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	625.75	μS / Cm
TEMPERATURE	24.28	DEG. C
FIXED LOSS	7.19	dB
DENSITY	1. 10	gm / Cm ³



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MATRIX

C:\ACOUSTIC PARTICLE SIZER\APS-
MATRICIES\IRON OXIDE IN WATER TO
30 um. MAT

VERSION	4.4
ACOUSTIC IMPEDANCE	1.75
SOUND SPEED	148998.63
pH	11.33
PERCENT SOLIDS, VOLUME	0.69

SOLVENT

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	701.44
TEMPERATURE	24.44
FIXED LOSS	7.20
DENSITY	1.18

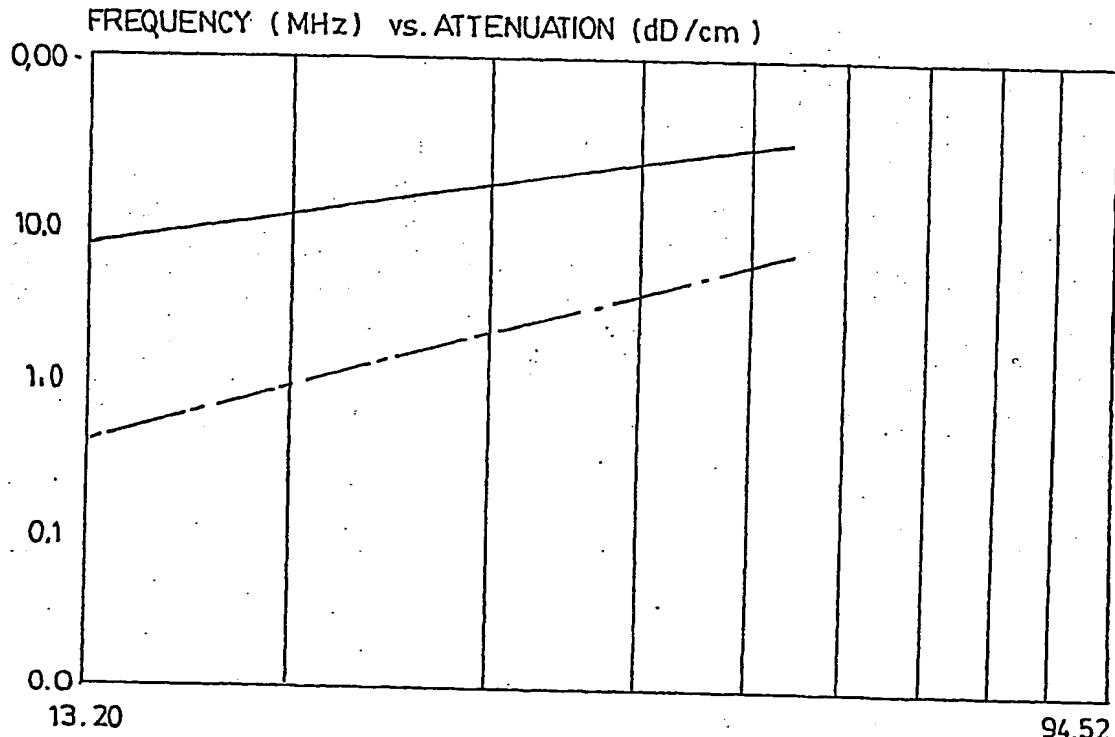


FIG. 11A

SAMPLE ATTEN. _____
SOLVENT ATTEN. _____

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MATRIX

C:\ACOUSTIC PARTICLE SIZER\APS-
MATRICIES\IRON OXIDE IN WATER TO
30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.75	gm / cm / s
SOUND SPEED	148998.63	m / s
pH	11.33	
PERCENT SOLIDS, VOLUME	0.69	

SOLVENT

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	701.44	µS / Cm
TEMPERATURE	24.44	DEG. C
FIXED LOSS	7.20	dB
DENSITY	1.18	gm / Cm ³

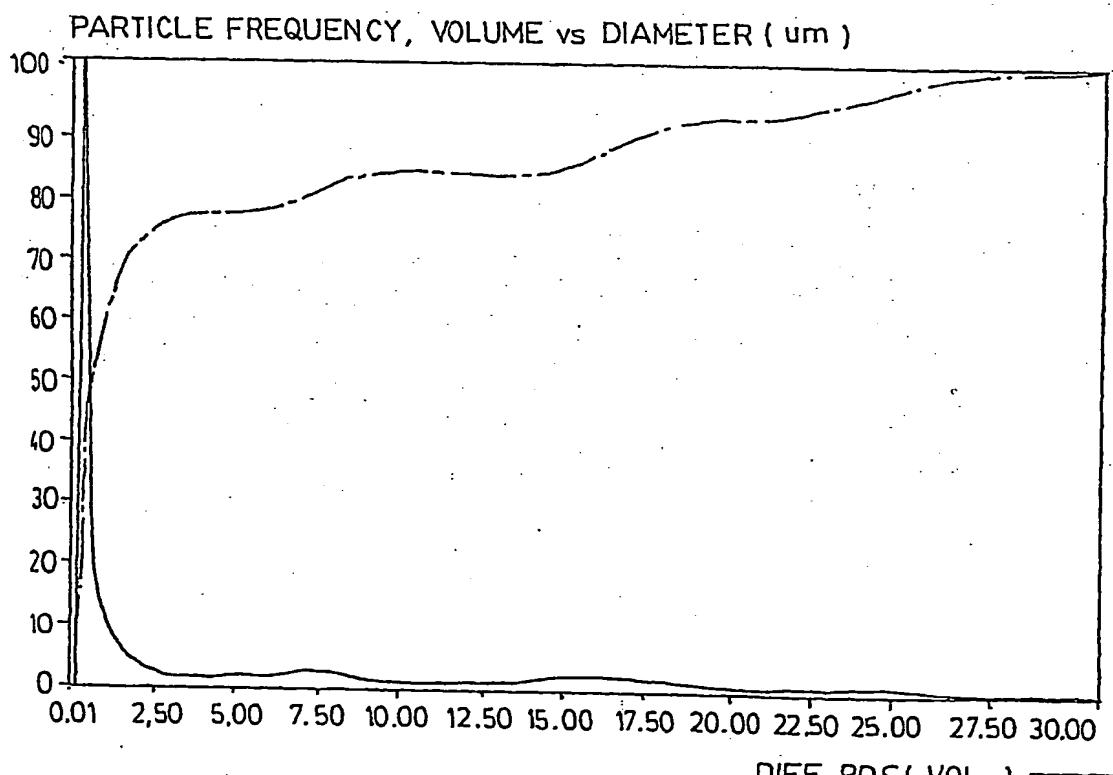


FIG: 11B

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MATRIX

C:\ACOUSTIC PARTICLE SIZER\APS-
MATRICIES \ IRON OXIDE IN WATER TO
30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.75	gm/cm/s
SOUND SPEED	148998.63	m/s
pH	11.33	
PERCENT SOLIDS, VOLUME	0.69	

SOLVENT

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	701.44	µS /Cm
TEMPERATURE	24.44	DEG. C
FIXED LOSS	7.20	dB
DENSITY	1.18	gm / Cm ³

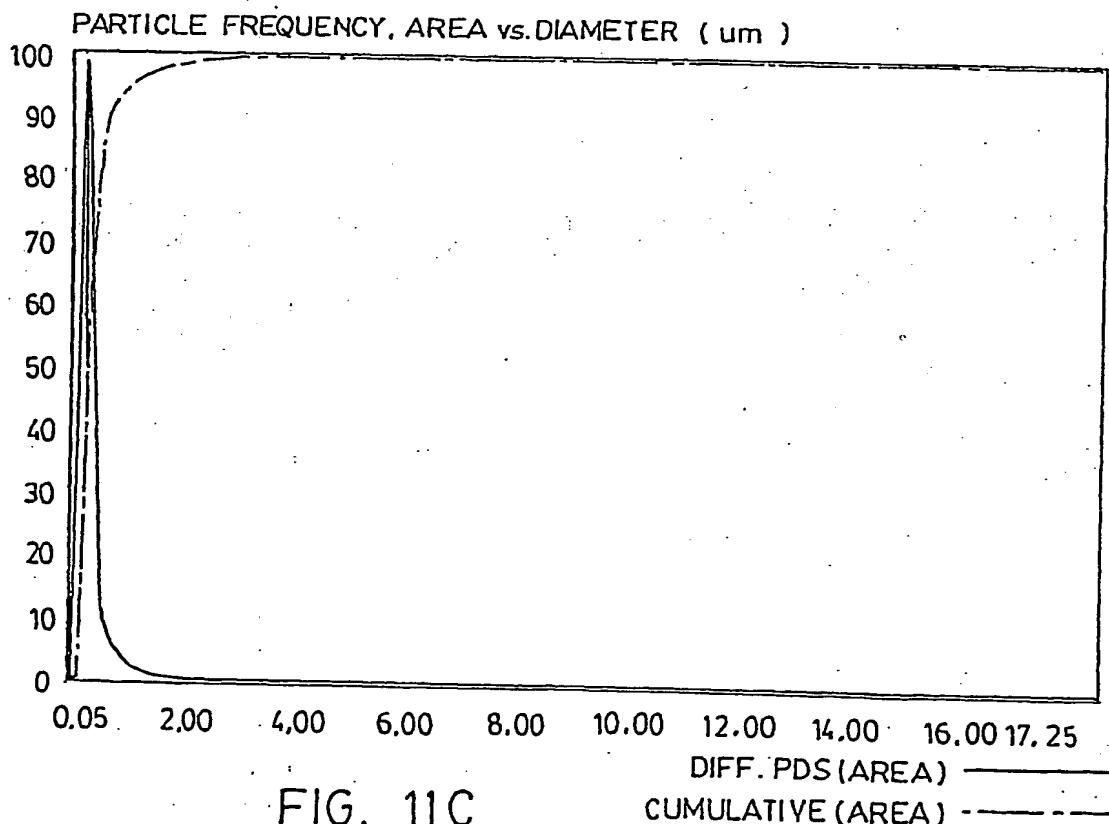


FIG. 11C

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MATRIX

C:\ACOUSTIC\PARTICLE SIZER\APS-
 MATRICIES\IRON OXIDE IN WATER TO
 30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.75	gm / cm / s
SOUND SPEED	148998.63	m / s
pH	11.33	
PERCENT SOLIDS, VOLUME	0.69	

SOLVENT

C:\ACOUSTIC\PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	701.44	μ S / Cm
TEMPERATURE	24.44	DEG. C
FIXED LOSS	7.20	dB
DENSITY	1.18	gm / Cm ³

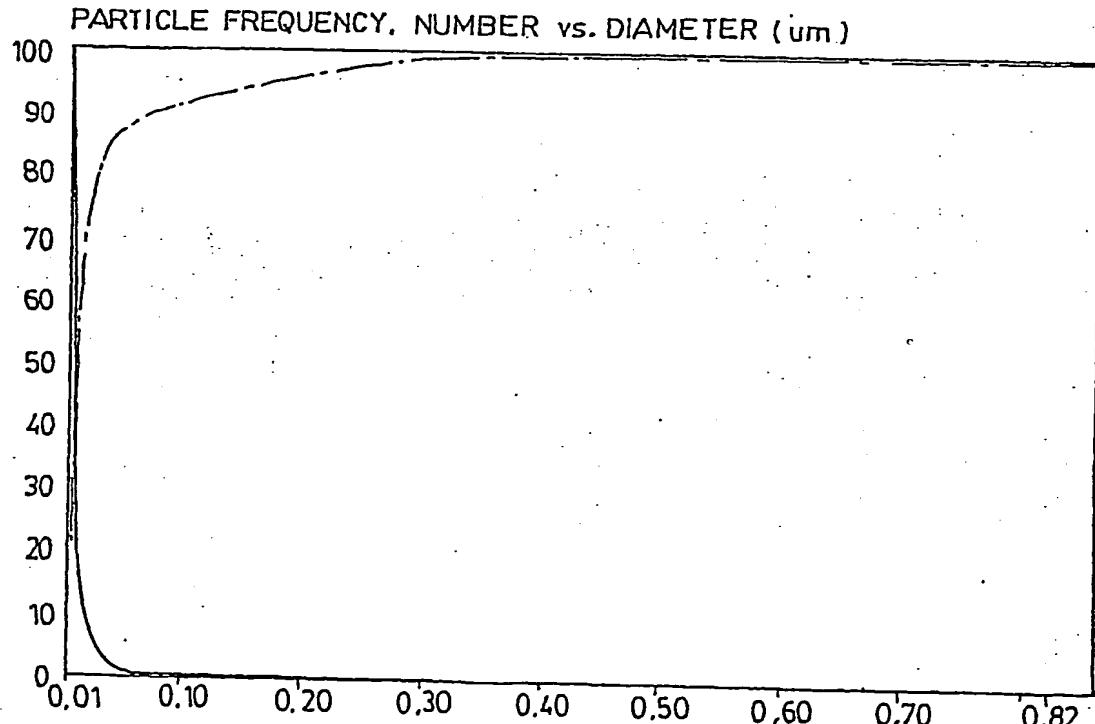


FIG. 11D

DIFF. PDS (NUM.) —————
 CUMULATIVE (NUM.) —————

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MATRIX

C:\ACOUSTIC PARTICLE SIZER\APS-MATRICIES\IRON OXIDE IN WATER TO 30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.75	gm/cm/s
SOUND SPEED	148658.25	m/s
pH	11.26	
PERCENT SOLIDS, VOLUME	1.54	

SOLVENT

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	748.67	μ S/cm
TEMPERATURE	22.68	DEG. C
FIXED LOSS	7.17	dB
DENSITY	1.18	gm / Cm ³

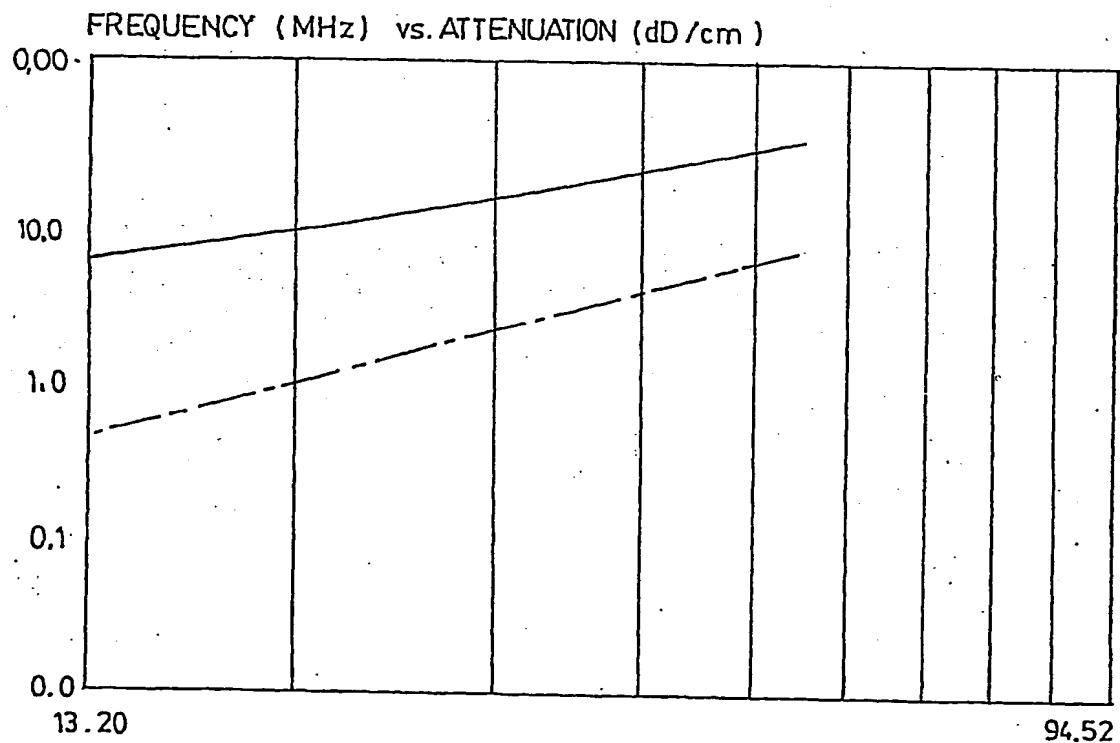


FIG. 12A

SAMPLE ATTEN. _____
 SOLVENT ATTEN. _____

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MATRIX

C:\ACOUSTIC PARTICLE SIZER\APS-
MATRICIES\IRON OXIDE IN WATER TO
30 um.MAT

VERSION	4.4
ACOUSTIC IMPEDANCE	1.75
SOUND SPEED	148658.25
pH	11.26
PERCENT SOLIDS, VOLUME	1.54

SOLVENT

C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	748.67	µS / Cm
TEMPERATURE	22.68	DEG. C
FIXED LOSS	7.17	dB
DENSITY	1.18	gm / Cm ³

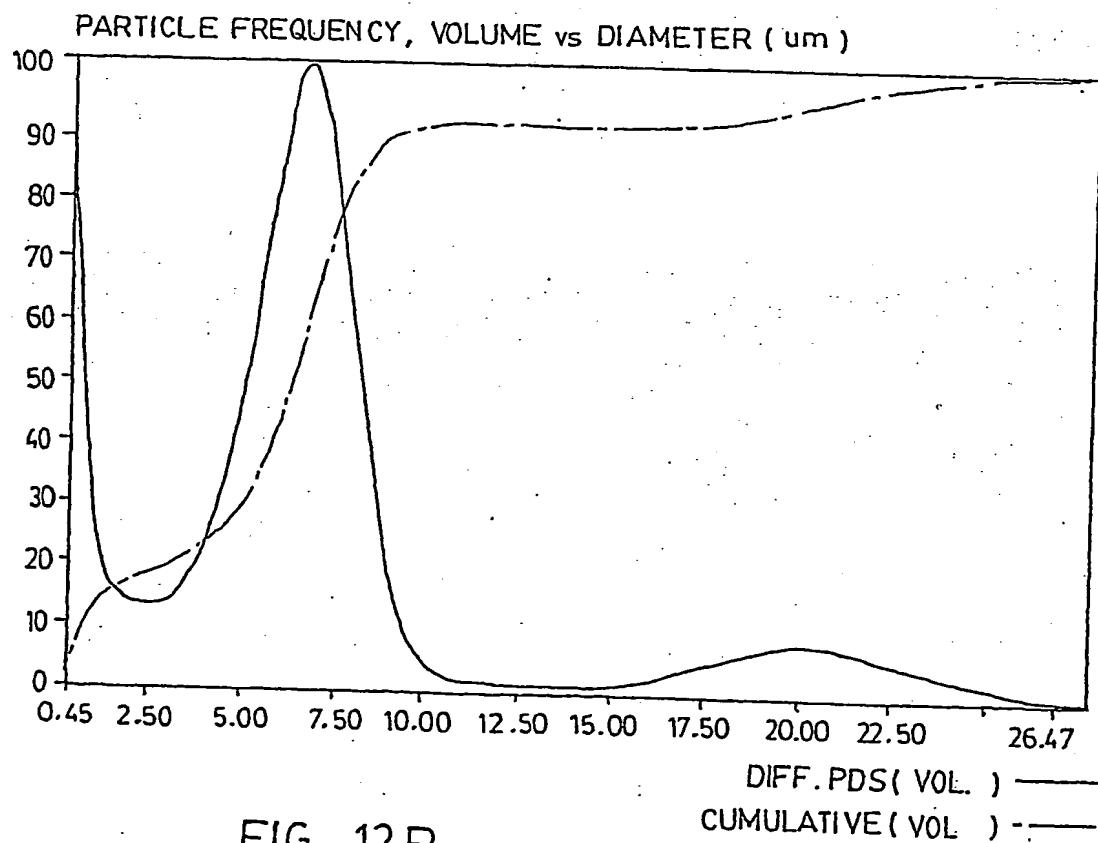


FIG. 12 B

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MATRIX C:\ACOUSTIC PARTICLE SIZER\APS-MATRICIES\IRON OXIDE IN WATER TO 30 um. MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.75	gm/cm/s
SOUND SPEED	148658.25	m/s
pH	11.26	
PERCENT SOLIDS, VOLUME	1.54	

SOLVENT C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	748.67	µS / Cm
TEMPERATURE	22.68	DEG. C
FIXED LOSS	7.17	dB
DENSITY	1.18	gm / Cm ³

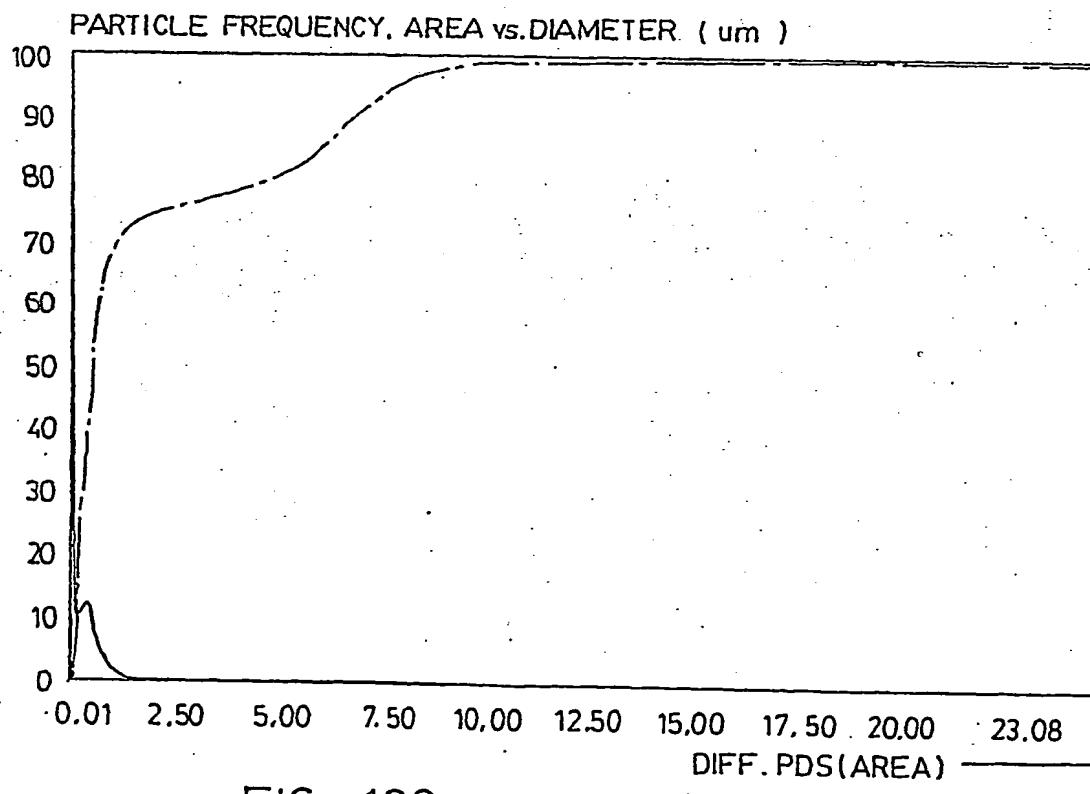


FIG. 12C

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MATRIX C:\ACOUSTIC PARTICLE SIZER\APS-MATRICES\IRON OXIDE IN WATER TO 30 μ m.MAT

VERSION	4.4	
ACOUSTIC IMPEDANCE	1.75	gm/cm/s
SOUND SPEED	148658.25	m/s
pH	11.26	
PERCENT SOLIDS, VOLUME	1.54	

SOLVENT C:\ACOUSTIC PARTICLE SIZER\CAL\WATER

CONDUCTIVITY	748.67	μ S / Cm
TEMPERATURE	22.68	DEG. C
FIXED LOSS	7.17	dB
DENSITY	1.18	gm / Cm ³

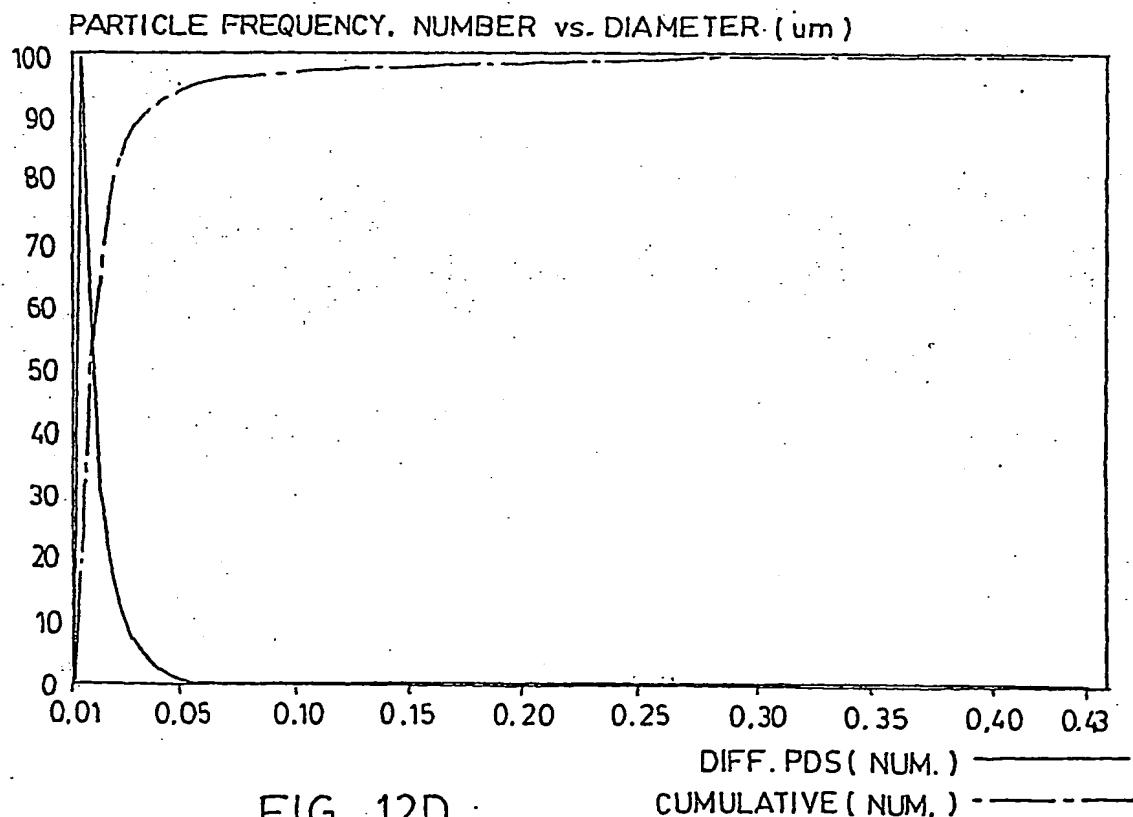
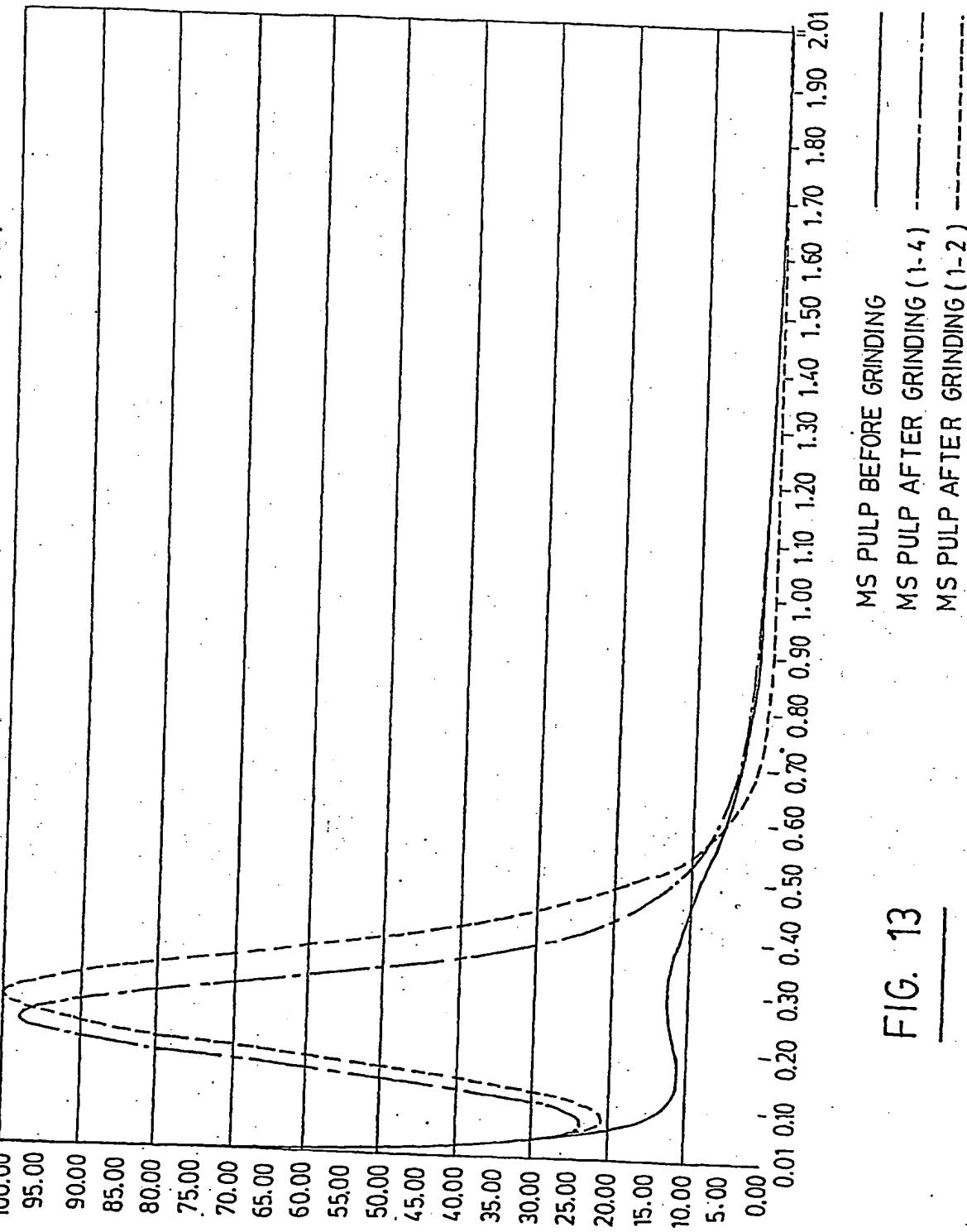


FIG. 12D

APS OVERLAY GRAPH :



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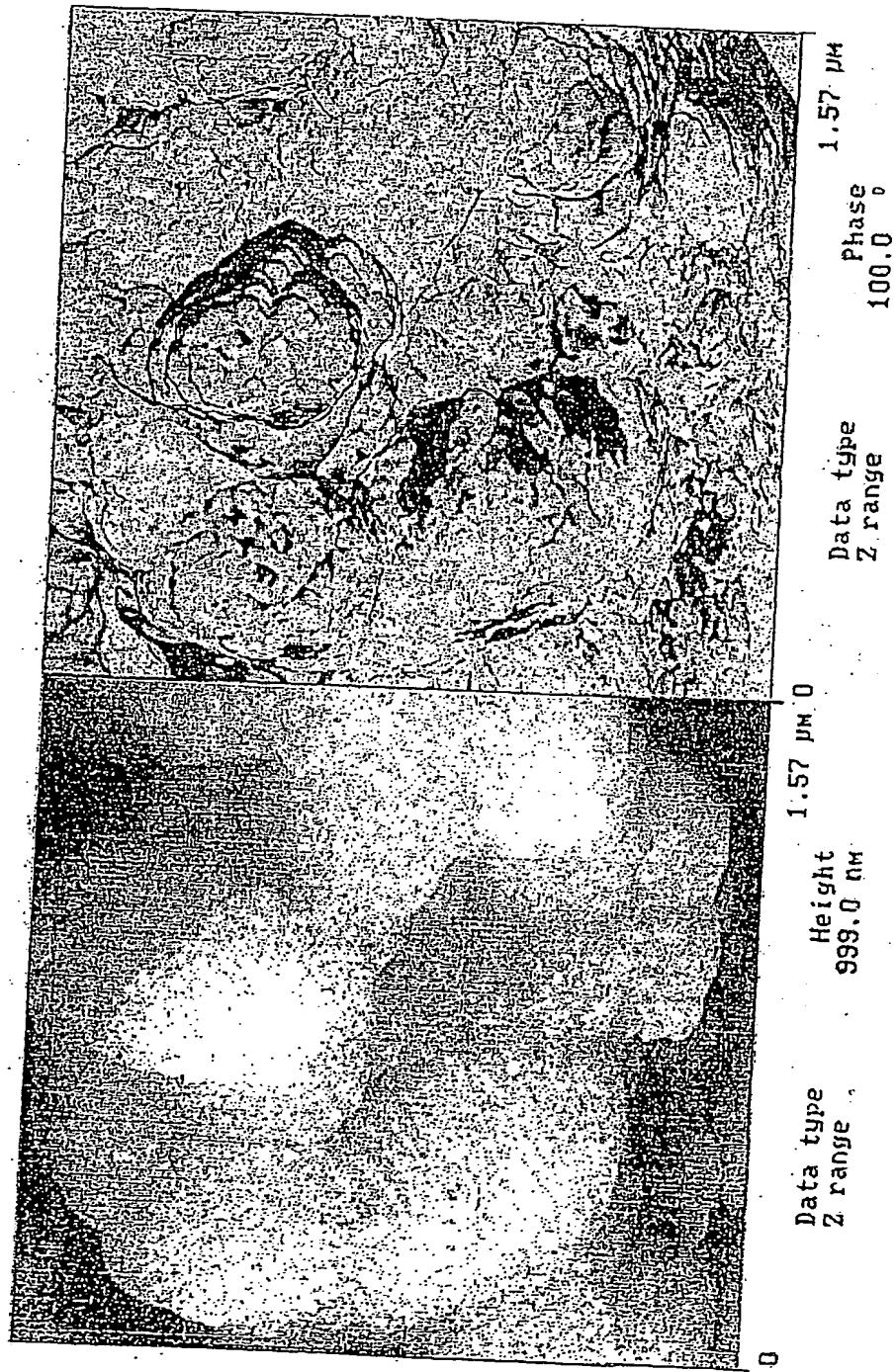


FIG. 14